Data from the Commercial Fishery for Arctic Charr, *Salvelinus alpinus* (Linnaeus), in the Cambridge Bay and Rankin Inlet Areas, Northwest Territories, 1983-84

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by

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ABSTRACT

Carder, G.W., and G. Low. 1985. Data from the commercial fishery for Arctic charr, Salvelinus alpinus (Linnaeus), in the Cambridge Bay and Rankin Inlet areas, Northwest Territories, 1983-84. Can. Data Rep. Fish. Aquat. Sci. 519: v + 26 p.

Biological samples from commercially caught Arctic charr were collected at the processing plants in Cambridge Bay and Rankin Inlet during 1983 and 1984. These anadromous Arctic charr were caught at the Halovik, Paliryauk, Ekalluk, Lauchlan, Ellice and Jayco rivers in the Cambridge Bay area and at Ferguson River and Rankin Inlet in the Rankin Inlet area. Production figures, age, length and dressed weight data are presented.

Key words: catch composition; catch statistics; commercial fishing; exploitation; fishery management; monitoring.

RESUME

Carder, G.W., and G. Low. 1985. Data from the commercial fishery for Arctic charr, Salvelinus alpinus (Linnaeus), in the Cambridge Bay and Rankin Inlet areas, Northwest Territories, 1983-84. Can. Data Rep. Fish. Aquat. Sci. 519: v + 26 p.

Aux usines de traitement de pêche commerciale, à Cambridge Bay et à Rankin Inlet, on a recueilli, au cours des années 1983 et 1984, des échantillons biologiques d'omble chevalier. Ces poissons anadromes provenaient des rivières Halovik, Paliryauk, Ekalluk, Lauchlan, Ellice et Jayco - toutes des rivières de la région de Cambridge Bay - et de la rivière Ferguson et de Rankin Inlet - dans la région de Rankin Inlet. L'étude de ces poissons porte sur la production, l'âge, la longueur et le poids.

Mots-clés: composition des prises; statistiques sur la prise; pêche commerciale; exploitation; gestion de pêcherie; contrôle.

INTRODUCTION

The Department of Fisheries and Oceans (DFO) has monitored the commercial fishery at Cambridge Bay, Northwest Territories since 1971 (Kristofferson and Carder 1980; Carder 1981; Carder 1983) and Rankin Inlet, Northwest Territories since 1972 (Carder and Peet 1983; Carder 1983). Information collected from biological samples taken has been used to assess the status of the catchable portion of various exploited anadromous Arctic charr stocks. Data obtained from 1983 and 1984 are presented in this report. Quotas and production figures from various fishing areas in the Cambridge Bay and the Keewatin areas are presented as well.

MATERIALS AND METHODS

THE FISHERIES

The early history of the Cambridge Bay commercial fishery is described by Barlishen and Webber (1973) and of the Rankin Inlet commercial fishery by Carder and Peet (1983). Recent data and a description of the Cambridge Bay area can be found in Kristofferson and Carder (1980), Carder (1981) and Carder (1983).

Arctic charr are caught primarily by gillnet with mesh sizes varying from 139 mm to 159 mm stretched measure. In 1983 during the upstream migration Jayco River was fished using an experimental fish wier (saputit) (Carder 1981).

SAMPLING PROGRAM

In 1983 and 1984 data were collected on Arctic charr taken from various rivers during the Cambridge Bay commercial fishery (Fig. 1). Sampling methods followed Kristofferson and Carder (1980) and Carder and Peet (1983). Biological samples were obtained during downstream and upstream migrations of Arctic charr at the following Cambridge Bay area rivers:

River	1983 Samples	1984 Samples
Ekalluk	upstream only	upstream only
Halovik	downstream only	downstream only
Paliryuak	downstream and upstream	downstream and upstream
Lauchlan	upstream only	downstream and upstream
Ellice	upstream only	upstream only
Jayco	downstream and upstream	downstream and upstream

Downstream fisheries take place during July when the charr are moving out of fresh water into the sea to feed. Upstream fisheries take place from about mid-August to early September when the charr are returning to freshwater to overwinter.

Fishing locations along the Keewatin coast are shown in Fig. 2. Churchill, Manitoba is to the south of the area covered by the map. During 1983 and 1984 samples were taken in the immediate vicinity of the community of Rankin Inlet during the upstream migration in August. Samples were taken from the Ferguson River upstream migration in 1983. Samples were not obtained from the other fisheries.

Quotas and production figures are shown in Table 1. Biological data are presented in Tables 2-40. All length tables indicate the lower boundary of the length interval (e.g. 450 indicates length interval 450-499 mm).

ACKNOWLEDGMENTS

The authors wish to thank the commercial fishermen of the Cambridge Bay and Rankin Inlet areas, and the staff of the Ikaluktutiak Co-operative Ltd., Cambridge Bay and the Issatik processing plant, Rankin Inlet for their assistance and co-operation.

Summer field assistance at Cambridge Bay was provided by L. Cherniak, K. Fisher, W. Pleunis, and L. LaRocque. Assistance in Rankin Inlet was provided by W. Ferguson and staff, DFO Rankin Inlet, during 1983 and 1984.

A.H. Kristofferson provided scientific advice and reviewed the final draft of this report. Drafting was done by graphic services. Word processing and typing services were done by L. Fletcher and B. Cohen. As well, the authors wish to thank the DFO staff at Yellowknife and Hay River for their help.

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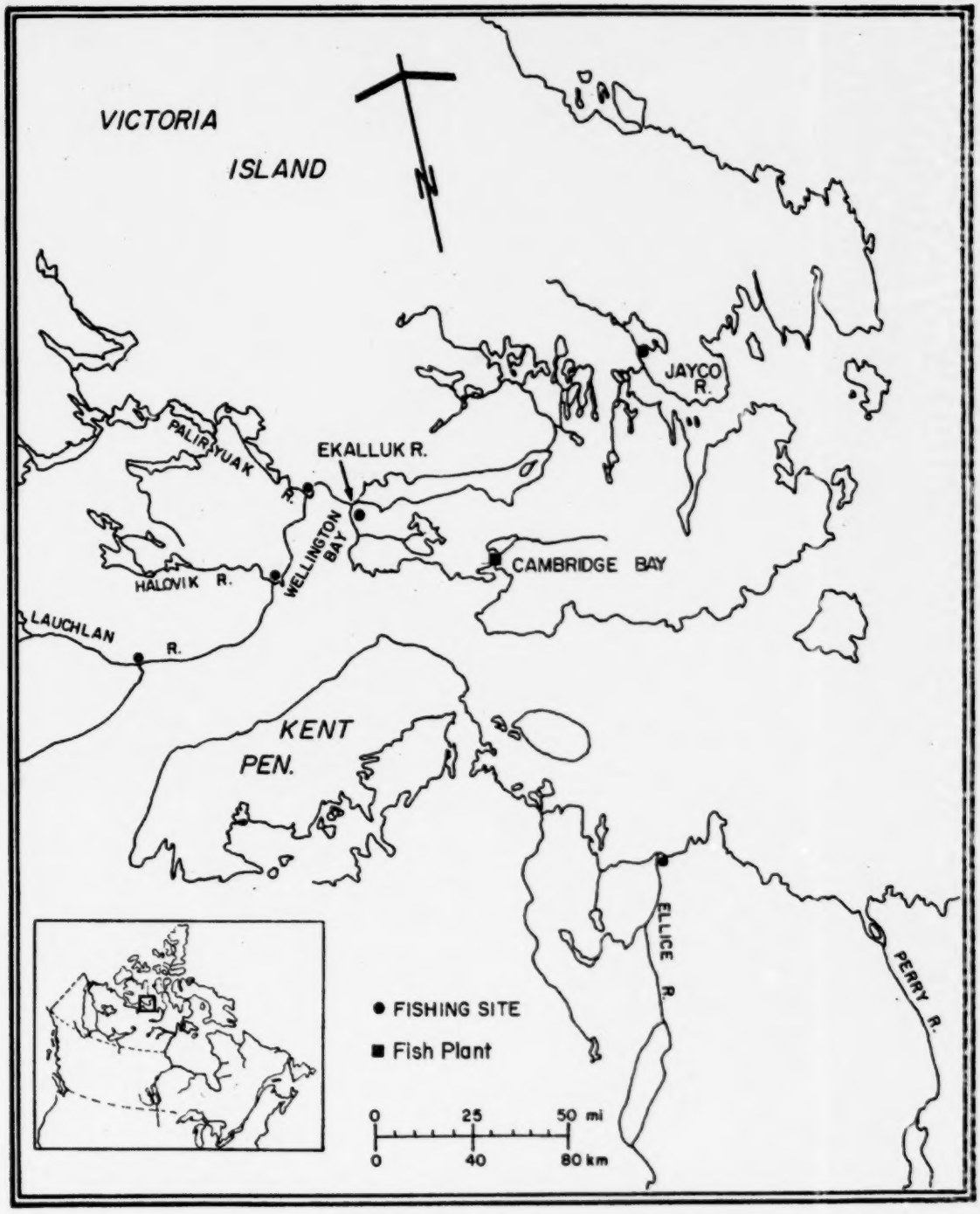

Fig. 1. Map of the Cambridge Bay area showing locations of commercial fishing sites.

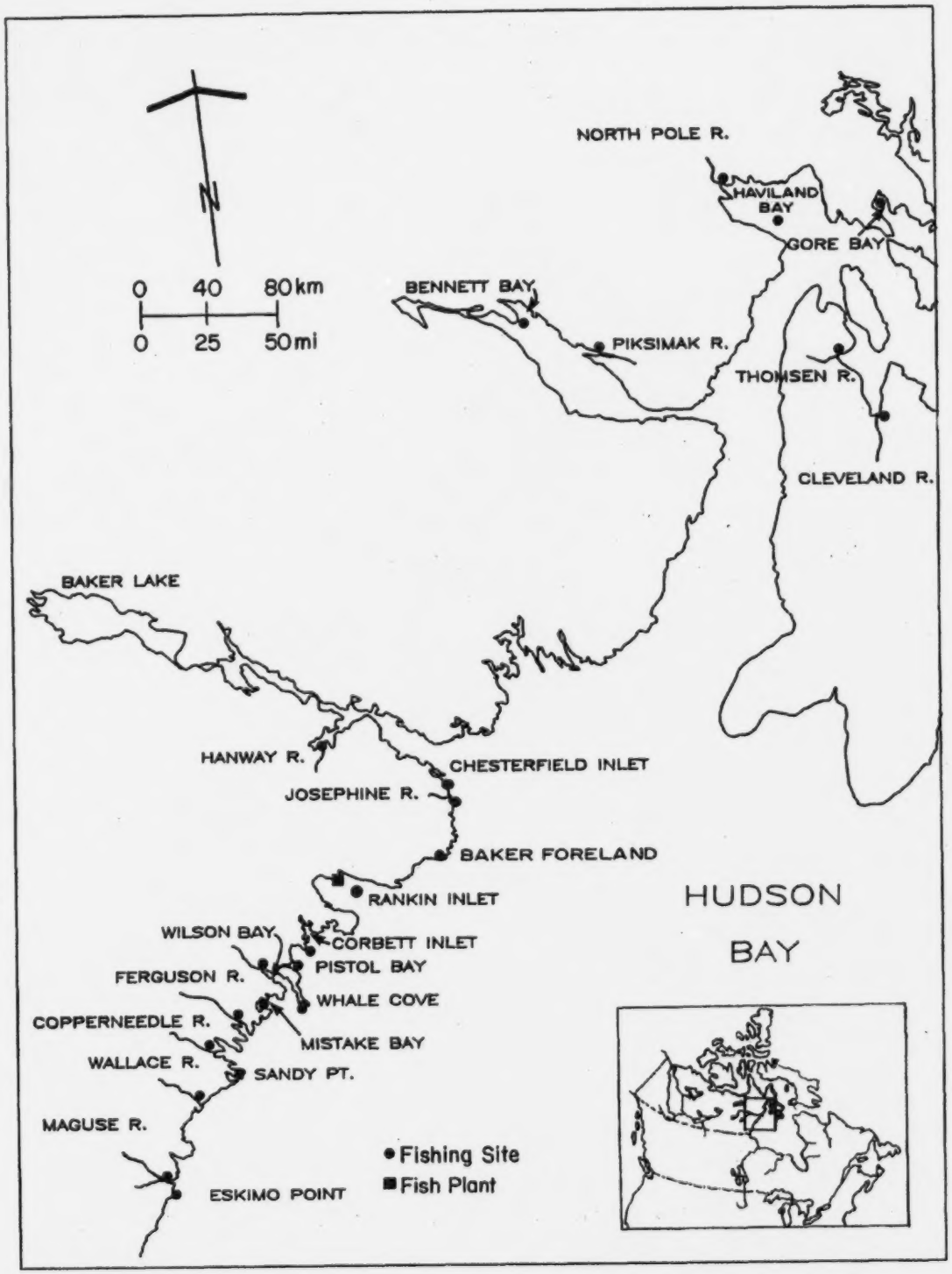

Fig. 2. Map of the Keewatin area showing locations of commercial fishing sites.

Table 1. Annual quotas and production of anadromous Arctic charr by fishery in the Cambridge Bay and Keewatin areas during 1983 and 1984.

	Quota (kg)	Production (kg)	
	1983 and 1984	1983	1984
Cambridge Bay area[1]			
Ekalluk River	14 500 (11 600 dr)[2]	14 840 (11 872 dr)	14 500 (11 600 dr)
Halovik River (30 mile)	6 800 (5 400 dr)	6 825 (5 460 dr)	7 306 (5 845 dr)
Paliryuak River (Surrey)	9 100 (7 200 dr)	8 831 (7 065 dr)	8 814 (7 051 dr)
Lauchlan River (Byron Bay)	9 100 (7 200 dr)	9 106 (7 285 dr)	9 876 (7 901 dr)
Ellice River	9 100 (7 200 dr)	9 046 (7 237 dr)	8 953 (7 162 dr)
Jayco River	13 600 (10 900 dr)	12 966 (10 373 dr)	13 515 (10 812 dr)
Keewatin area[3]			
North Pole River	2 300	818 (711 dr)	45 (39 dr)
Haviland Bay area	2 300	364 (317 dr)	109 (95 dr)
Gore Bay area	3 600	272 (237 dr)	380 (330 dr)
Thomsen River area	2 300	454 (395 dr)	-
Piksimak River	2 300	454 (395 dr)	-
Cleveland River	9 100	682 (593 dr)	45 (39 dr)
Bennett Bay	2 300	-	798 (694 dr)
Chesterfield Inlet area (Fish Bay)	2 300	545 (474 dr)	2 591 (2 253 dr)
Hanway River	2 300	409 (356 dr)	-
Josephine River	4 500	591 (514 dr)	141 (123 dr)
Baker Foreland	2 300	2 200 (1 913 dr)	332 (289 dr)
Rankin Inlet	11 400 (1983) (6 800) (1984)	6 053 (5 263 dr)	4 706 (4 092 dr)
Corbett Inlet	4 500 (1983) (2 300) (1984)	545 (474 dr)	353 (307 dr)
Pistol Bay	2 300	364 (317 dr)	360[4] (313 dr)

Table 1. cont'd

	Quota (kg)	Production (kg)	
	1983 and 1984	1983	1984
Whale Cove area	2 300	546 (475 dr)	602 (523 dr)
Wilson Bay	9 100	427 (371 dr)	360[4] (313 dr)
Mistake Bay	2 300	455 (396 dr)	360[4] (313 dr)
Ferguson River	13 600	5 000 (4 348 dr)	360[4] (313 dr)
Copperneedle River	4 500	545 (474 dr)	-
Sandy Point	900	68 (59 dr)	150[4] (130 dr)
Wallace River	2 300	136 (118 dr)	-
Maguse River	4 500 (1983)	2 000 (1 739 dr)	-
	closed (1984)		closed
Eskimo Point area	4 500	1 343 (1 168 dr)	1 363[4] (1 185 dr)
Churchill, Manitoba	500	500[4] (435 dr)	unknown

[1]Round weight calculated using a dressed weight to round weight conversion factor of 1.25 (includes estimate of culls).

[2]Dressed weight (viscera and gills removed).

[3]Round weight calculated using a dressed weight to round weight conversion factor of 1.15 (does not includes estimate of culls).

[4]Estimated production.

Table 2. Age composition of Arctic charr taken by the commercial fishery at Ekalluk River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
9	2	2	564	118	1875	1096
10	4	3	574	39.9	2175	393
11	9	7	607	77.1	2483	1006
12	20	17	653	50.3	2943	697
13	25	21	669	48.3	3246	654
14	27	22	708	51.4	3580	723
15	12	10	709	27.6	3600	568
16	14	12	708	58.9	3536	828
17	5	4	696	35.7	3390	622
18	1	1	624	-	2750	-
19	1	1	677	-	2900	-
20	1	1	800	-	5000	-
TOTAL	121					
MEAN			676	64.1	3238	824
MEAN AGE	13.6					

Table 3. Length composition of Arctic charr taken by the commercial fishery at Ekalluk River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	1	0	480	1100	-
500	7	3	533	1614	281
550	8	3	585	2238	423
600	42	18	627	2579	266
650	79	34	674	3091	331
700	62	27	724	3684	404
750	25	11	773	4370	675
800	5	2	812	5360	476
TOTAL	229				
MEAN			684	3263	818

Table 4. Age composition of Arctic charr taken by the commercial fishery at Ekalluk River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
9	1	1	550	-	1750	-
10	3	2	579	67.1	2183	852
11	3	2	648	22.2	2950	180
12	12	8	636	48.2	2875	750
13	22	15	655	54.1	3186	743
14	45	30	692	54.4	3840	1029
15	25	17	688	50.9	3634	903
16	22	15	719	54.1	4145	1090
17	7	5	735	31.3	4314	497
18	7	5	737	72.2	4336	1284
19	1	1	775	-	5450	-
20	2	1	739	2.1	3900	707
24	1	1	706	-	4000	-
TOTAL	151					
MEAN			687	61.7	3672	1041
MEAN AGE	14.5					

Table 5. Length composition of Arctic charr taken by the commercial fishery at Ekalluk River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	2	1	523	1600	424
550	8	3	588	2300	380
600	44	19	624	2670	226
650	61	26	676	3348	386
700	76	33	722	4137	442
750	37	16	771	5096	572
800	3	1	809	5683	965
TOTAL	231				
MEAN			694	3737	972

Table 6. Age composition of Arctic charr taken by the commercial fishery at Halovik River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	4	4	672	39.6	2750	759
11	6	6	699	28.7	3192	734
12	9	8	700	59.7	3033	888
13	21	19	709	52.5	3221	779
14	26	24	699	36.9	3073	462
15	18	17	718	42.4	3278	620
16	12	11	754	40.9	3571	658
17	9	8	734	45.1	3544	756
18	2	2	763	31.1	3675	884
19	2	2	709	1.4	3300	283
TOTAL	109					
MEAN			713	46.9	3236	678
MEAN AGE	14.1					

Table 7. Length composition of Arctic charr taken by the commercial fishery at Halovik River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	2	1	578	1600	0
600	13	7	629	2188	329
650	56	31	680	2804	339
700	73	41	722	3375	352
750	32	18	775	3995	474
800	3	2	816	4233	104
TOTAL	179				
MEAN			711	3216	655

Table 8. Age composition of Arctic charr taken by the commercial fishery at Halovik River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	1	1	458	-	800	-
12	1	1	581	-	1700	-
13	7	4	639	54.5	2486	681
14	18	11	692	36.2	3125	584
15	36	22	697	49.1	3200	679
16	44	27	710	38.0	3364	604
17	35	22	732	48.2	3797	925
18	9	6	755	45.0	3961	801
19	7	4	725	56.8	3721	844
20	1	1	788	-	4950	-
21	2	1	729	60.1	3850	778
TOTAL	161					
MEAN			708	54.4	3395	828
MEAN AGE	15.9					

Table 9. Length composition of Arctic charr taken by the commercial fishery at Halovik River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	1	1	458	800	-
500	2	1	525	1225	247
550	2	1	585	1725	35
600	11	6	627	2200	218
650	57	29	678	2982	300
700	84	43	722	3526	363
750	37	19	768	4280	539
800	3	2	823	5533	898
TOTAL	197				
MEAN			710	3411	782

Table 10. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Paliryuak River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	1	1	700	-	3300	-
12	12	14	668	43.3	2633	436
13	9	10	683	32.8	2994	623
14	25	28	700	33.6	3146	540
15	11	13	731	50.3	3623	744
16	19	22	702	53.7	3126	923
17	7	8	716	48.6	3350	709
18	1	1	729	-	3000	-
19	3	3	714	65.0	3200	705
TOTAL	88					
MEAN			700	46.1	3134	705
MEAN AGE	14.6					

Table 11. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Paliryuak River,1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	1	1	583	1750	-
600	19	13	633	2284	195
650	60	40	679	2770	283
700	50	33	719	3390	318
750	16	11	773	4109	423
800	4	3	814	4500	451
TOTAL	150				
MEAN			700	3097	650

Table 12. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Paliryuak River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
9	3	3	580	60.6	1917	701
10	2	2	640	4.2	3100	354
11	5	5	616	68.7	2470	1228
12	19	17	657	49.6	2953	878
13	31	28	670	40.1	3161	602
14	19	17	685	42.5	3376	813
15	19	17	700	49.2	3584	774
16	5	5	690	52.1	3540	758
17	1	1	754	-	4750	-
18	4	4	673	81.4	3375	1517
19	1	1	722	-	3700	-
TOTAL	109					
MEAN			672	52.9	3214	857
MEAN AGE	13.5					

Table 13. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Paliryuak River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	2	1	543	1400	71
550	18	10	578	1853	280
600	34	18	629	2569	334
650	68	36	673	3139	369
700	47	25	720	3905	386
750	18	10	770	4653	523
800	2	1	808	4750	141
TOTAL	189				
MEAN			677	3247	876

Table 14. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Paliryuak River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	1	1	522	-	1150	-
11	1	1	412	-	600	-
12	6	5	596	32.7	1967	517
13	13	10	649	47.3	2569	586
14	18	15	678	51.1	2967	734
15	26	21	691	51.0	3137	662
16	23	19	720	41.1	3561	790
17	21	17	714	35.8	3545	454
18	4	3	706	48.8	3363	594
19	5	4	699	14.5	3210	432
20	3	2	706	4.0	3367	176
21	2	2	786	53.0	4450	1344
22	1	1	763	-	3950	-
TOTAL	124					
MEAN			689	60.9	3151	819
MEAN AGE	15.5					

Table 15. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Paliryuak River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
400	1	1	412	600	-
500	2	1	528	1250	141
550	8	5	581	1744	102
600	13	8	625	2223	309
650	55	35	680	3028	242
700	54	35	720	3535	330
750	18	12	767	4169	510
800	5	3	815	5200	354
TOTAL	156				
MEAN			695	3234	816

Table 16. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Paliryuak River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
8	1	1	523	-	1700	-
10	7	5	528	14.9	1714	186
11	10	7	599	43.3	2495	460
12	17	11	614	44.2	2738	681
13	14	9	625	42.7	2832	692
14	24	16	652	56.2	3165	913
15	33	22	691	50.3	3806	970
16	21	14	701	62.5	3969	1041
17	15	10	702	43.1	3840	706
18	2	1	705	13.4	3800	141
19	2	1	739	68.6	4100	1131
20	1	1	746	-	4100	-
21	1	1	712	-	4600	-
TOTAL	148					
MEAN			658	68.5	3323	1033
MEAN AGE	14.3					

Table 17. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Paliryuak River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	1	1	499	1350	-
500	12	6	532	1767	172
550	21	11	580	2193	328
600	38	20	626	2788	338
650	53	28	677	3500	380
700	48	25	719	4203	405
750	14	7	772	5196	403
800	2	1	813	5350	1838
TOTAL	189				
MEAN			665	3414	1012

Table 18. Age composition of Arctic charr taken by the commercial fishery at Lauchlan River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
8	2	1	476	40.3	1650	1061
9	5	4	586	62.9	2340	974
10	8	6	577	81.1	2125	850
11	9	6	637	37.3	2711	533
12	25	18	671	52.3	3318	988
13	30	22	649	47.6	2915	768
14	35	25	680	60.5	3351	1000
15	12	9	682	32.6	3233	679
16	6	4	720	42.9	3500	616
17	3	2	704	16.5	3750	608
18	2	1	738	34.6	4250	212
19	1	1	788	-	4800	-
21	1	1	825	-	5000	-
TOTAL	139					
MEAN			662	66.9	3118	958
MEAN AGE	13.1					

Table 19. Length composition of Arctic charr taken by the commercial fishery at Lauchlan River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
400	1	1	447	900	-
450	3	2	474	1067	153
500	4	2	521	1675	511
550	17	9	580	2032	296
600	44	24	622	2489	338
650	62	34	672	3176	379
700	39	21	720	3895	446
750	12	7	772	4750	667
800	1	1	825	5000	-
TOTAL	183				
MEAN			661	3091	910

Table 20. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Lauchlan River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
12	1	1	620	-	2300	-
13	11	8	680	45.2	2909	602
14	12	9	680	25.5	2929	296
15	28	21	703	52.6	3277	745
16	34	26	709	42.9	3299	728
17	30	23	725	32.9	3402	558
18	12	9	738	46.5	3604	739
19	3	2	694	21.1	3050	328
20	1	1	676	-	2800	-
TOTAL	132					
MEAN			708	45.1	3262	667
MEAN AGE	15.8					

Table 21. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Lauchlan River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	2	1	580	1650	0
600	12	7	628	2300	192
650	59	34	679	2871	281
700	69	40	721	3399	357
750	27	16	770	4094	480
800	4	2	824	4688	807
TOTAL	173				
MEAN			708	3261	660

Table 22. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Lauchlan River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
9	1	1	537	-	1800	-
10	4	4	573	17.3	2038	103
11	5	5	605	20.4	2360	327
12	13	14	639	42.9	2846	732
13	6	7	665	54.1	3217	829
14	21	23	669	49.5	3340	883
15	16	18	685	49.1	3650	1023
16	18	20	720	38.5	4111	735
17	4	4	692	44.5	3650	826
18	2	2	719	45.3	4125	813
19	1	1	793	-	5550	-
TOTAL	91					
MEAN			671	59.3	3396	995
MEAN AGE	14.1					

Table 23. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Lauchlan River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	1	1	537	1800	-
550	13	11	581	2058	146
600	28	23	628	2641	328
650	27	22	673	3400	385
700	34	28	723	4171	440
750	16	13	769	5009	463
800	2	2	827	5875	177
TOTAL	121				
MEAN			681	3537	1042

Table 24. Age composition of Arctic charr taken by the commercial fishery at Ellice River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
7	4	3	546	40.3	2138	475
8	11	9	563	33.5	2327	454
9	28	24	587	30.6	2543	403
10	21	18	632	35.0	3126	617
11	24	21	655	41.5	3419	833
12	16	14	664	31.4	3619	808
13	10	9	652	48.4	3450	1195
14	2	2	700	26.2	3575	389
15	1	1	687	-	3400	-
TOTAL	117					
MEAN			624	52.3	3043	833
MEAN AGE	10.3					

Table 25. Length composition of Arctic charr taken by the commercial fishery at Ellice River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	3	2	484	1383	126
500	5	3	535	1930	214
550	44	27	578	2443	264
600	56	35	623	2920	343
650	42	26	674	3651	435
700	10	6	717	4680	795
750	2	1	752	5900	0
TOTAL	162				
MEAN			626	3066	837

Table 26. Age composition of Arctic charr taken by the commercial fishery at Ellice River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
7	9	5	511	22.8	1800	175
8	60	35	560	33.6	2275	460
9	36	21	585	42.5	2624	561
10	29	17	600	41.6	2778	503
11	6	3	635	54.0	3175	678
12	5	3	606	33.8	2740	352
13	11	6	651	30.9	3336	533
14	5	3	681	42.1	3820	777
15	6	3	712	61.0	4233	1263
16	4	2	709	69.5	4325	1358
17	1	1	670	-	3500	-
20	1	1	766	-	4750	-
TOTAL	173					
MEAN			593	61.2	2701	809
MEAN AGE	9.8					

Table 27. Length composition of Arctic charr taken by the commercial fishery at Ellice River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
450	8	4	477	1444	203
500	33	15	529	1867	237
550	72	33	574	2456	228
600	52	24	623	3020	278
650	22	10	669	3539	328
700	19	9	719	4316	497
750	9	4	773	5400	484
800	2	1	807	5675	35
TOTAL	217				
MEAN			608	2889	972

Table 28. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Jayco River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
10	2	3	670	19.8	2925	35
11	2	3	621	21.9	2000	424
12	12	16	625	62.2	2275	564
13	15	20	661	38.1	2570	376
14	8	11	647	45.8	2394	500
15	12	16	652	34.8	2438	497
16	10	13	661	39.5	2590	426
17	7	9	667	41.5	2550	461
18	3	4	729	29.5	3083	425
19	1	1	638	-	2150	-
20	1	1	709	-	2800	-
21	1	1	652	-	2400	-
25	1	1	706	-	2500	-
TOTAL	75					
MEAN			656	45.9	2493	471
MEAN AGE	14.5					

Table 29. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Jayco River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	4	3	533	1425	340
550	10	7	588	1895	240
600	37	27	624	2151	233
650	58	42	668	2578	317
700	27	19	715	3007	268
750	3	2	758	3300	180
TOTAL	139				
MEAN			658	2481	485

Table 30. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Jayco River, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
8	1	1	580	-	1900	-
10	5	6	615	21.6	2330	186
11	12	13	650	39.2	2925	600
12	19	21	634	40.5	2526	557
13	16	18	638	37.7	2553	381
14	12	13	648	56.2	2638	525
15	10	11	646	48.7	2680	711
16	10	11	664	51.2	2915	613
17	1	1	701	-	3500	-
18	1	1	730	-	3450	-
19	2	2	660	42.4	2450	354
TOTAL	89					
MEAN			644	45.0	2662	559
MEAN AGE	13.2					

Table 31. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Jayco River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
550	24	14	585	2027	303
600	78	45	624	2427	265
650	51	29	670	3022	340
700	18	10	717	3414	307
750	2	1	762	3725	460
TOTAL	173				
MEAN			643	2664	529

Table 32. Age composition of Arctic charr taken by the commercial fishery (downstream migration) at Jayco River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
11	1	1	568	-	1550	-
12	5	4	612	27.7	2060	431
13	5	4	631	22.2	2350	364
14	20	17	638	42.8	2540	530
15	32	26	647	42.3	2673	651
16	23	19	645	61.8	2546	681
17	20	17	658	50.0	2715	755
18	9	7	690	52.9	3006	734
19	5	4	710	42.1	3340	680
20	1	1	675	-	2950	-
TOTAL	121					
MEAN			650	50.8	2640	674
MEAN AGE	15.5					

Table 33. Length composition of Arctic charr taken by the commercial fishery (downstream migration) at Jayco River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	1	1	546	1450	-
550	25	13	582	1750	205
600	59	32	626	2345	243
650	60	32	671	2858	283
700	33	18	718	3382	393
750	7	4	759	4236	282
800	1	1	800	3950	-
TOTAL	186				
MEAN			656	2689	662

Table 34. Age composition of Arctic charr taken by the commercial fishery (upstream migration) at Jayco River,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
8	1	1	596	-	2150	-
12	4	3	575	21.5	1863	354
13	12	10	637	46.7	2896	668
14	27	23	639	35.3	2924	530
15	39	34	642	39.1	2876	560
16	19	16	651	42.9	3003	681
17	5	4	675	55.9	3180	856
18	6	5	638	33.0	2858	695
19	1	1	712	-	3550	-
20	1	1	775	-	4200	-
25	1	1	701	-	4200	-
TOTAL	116					
MEAN			643	43.8	2909	643
MEAN AGE	15.0					

Table 35. Length composition of Arctic charr taken by the commercial fishery (upstream migration) at Jayco River,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
500	2	1	537	1425	247
550	20	12	576	1995	306
600	63	39	628	2649	336
650	54	34	672	3324	355
700	18	11	719	3875	561
750	4	2	772	4588	497
TOTAL	161				
MEAN			649	2964	724

Table 36. Age composition of Arctic charr taken by the commercial fishery at Rankin Inlet, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
5	1	1	410	-	800	-
6	1	1	447	-	1050	-
7	3	4	545	19.8	1867	153
8	4	5	578	40.3	2113	333
9	17	23	596	32.1	2231	305
10	12	16	621	45.9	2619	497
11	16	22	631	38.6	2566	526
12	6	8	640	36.7	2717	515
13	10	14	657	64.4	3110	1019
14	2	3	645	49.5	2600	707
16	1	1	800	-	5000	-
TOTAL	73					
MEAN			616	61.5	2519	730
MEAN AGE	10.4					

Table 37. Length composition of Arctic charr taken by the commercial fishery at Rankin Inlet, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
400	2	2	429	925	177
500	4	4	537	1850	100
550	25	28	577	2053	234
600	34	38	622	2494	251
650	14	16	668	2889	278
700	7	8	711	3736	328
750	1	1	760	5200	-
800	2	2	818	5275	389
TOTAL	89				
MEAN			621	2559	769

Table 38. Age composition of Arctic charr taken by the commercial fishery at Rankin Inlet,1984.

AGE (YR)	NO.	PERCENT	FORK LENGTH(MM) MEAN	FORK LENGTH(MM) SD	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
6	2	3	460	21.2	975	106
7	9	12	490	48.5	1328	415
8	29	39	545	40.5	1834	385
9	19	26	571	46.8	2013	456
10	7	9	576	23.8	2093	296
11	5	7	620	29.8	2630	309
12	3	4	635	50.7	2483	729
TOTAL	74					
MEAN			555	55.4	1900	527
MEAN AGE	8.6					

Table 39. Length composition of Arctic charr taken by the commercial fishery at Rankin Inlet,1984.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	DRESSED WEIGHT(G) SD
350	1	1	380	700	-
400	6	7	431	858	92
450	8	9	470	1106	112
500	19	21	532	1689	102
550	35	39	572	2040	187
600	18	20	617	2497	271
650	2	2	675	3100	212
TOTAL	89				
MEAN			554	1903	550

Table 40. Length composition of Arctic charr taken by the commercial fishery at Ferguson River, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	DRESSED WEIGHT(G) MEAN	SD
550	13	13	578	1969	149
600	24	25	627	2544	316
650	24	25	679	3173	335
700	21	22	717	3538	329
750	10	10	766	4290	504
800	4	4	818	4688	366
850	1	1	850	5100	-
TOTAL	97				
MEAN			677	3132	831

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